



Brad Burnham
08 December 2010

15 Comments

Internet Access Should Be Application-Agnostic

Julius Genachowski, the Chairman of the FCC, recently announced that he would ask the FCC to adopt rules to protect the open Internet at its open meeting on December 21st. We applaud the Chairman's effort, but we worry the proposed framework, as it is currently drafted, will not result in the free and open Internet that is his goal.

The [proposed rule](#) has several [problems](#):

1. it prohibits only unjust and unreasonable discrimination but does not clearly define those terms,
2. broadband access providers are not prohibited from charging web services like Google, Facebook or Twitter a fee to reach consumers or to get faster access to consumers, and
3. users who access the Internet over wireless networks have few protections.

If these concerns are not addressed, access providers could use their ability to control access to the Internet to control the market for Internet applications and services.

I remember too well, the experience of investing in cable television programming start-ups back in the 90s when there was limited channel capacity on cable networks and the companies that controlled access to consumers made it very clear that they would need to own 20% of your company before they would agree to carry your programming on their network. The Internet we know today exists only because, until now, there have been no gatekeepers between consumers and service providers. We need to keep it that way.

The good news is that the FCC can balance the interests of web services innovators and consumers with those of telephone and cable companies without changing the substance of the [proposed rule](#) simply by defining application-specific discrimination as unreasonable.

[Barbara van Schewick](#), a professor at the Stanford Law School, describes this approach [here](#). She says the correct approach is:

"A non-discrimination rule that would ban all application-specific discrimination (i.e. discrimination based on applications or classes of applications), but would allow application-agnostic discrimination."

The brilliance of this approach is that it offers cable and telephone companies great flexibility to package and price their services and to manage their networks without harming investment and innovation in web services.

If a user wants more packets or less latency, an access provider should be able to sell that to them. But for that access service to meet the test of being application-agnostic, the choice of when to use these services and for which applications must be left to the

user.

Similarly, if a user consumes a disproportionate share of packets at certain times of day, a network provider should be able to temporarily reduce that user's throughput to avoid degrading the experience of others. These actions would not threaten a [free and open Internet](#) because they are targeted at a consumer's use of network capacity, not a specific application.

On the other hand, if access providers throttled only the bandwidth available to BitTorrent to deal with congestion, that would clearly be application-specific discrimination. Blocking or throttling video would be discrimination against a class of applications.

This approach works equally well for wireless.

If an older wireless network does not have the capacity to handle lots of packets at peak times, it can reasonably limit the number of packets available to users. When congestion is eased it can open up the pipe again.

This is reasonable network management that does not distort the competitive market for web services. Blocking or discriminating against a specific web service like Skype or against a whole class of web services like streaming video would be prohibited under this framework.

If it is not possible to solve all network management problems on older wireless networks in an application-agnostic way, there could be an exception; but the presumption should be that network management would be as application-agnostic as possible.

If cable and telephone companies intend to use their control over consumer's access to the Internet to extract outside profits from the innovative companies working in the dynamic and competitive market for Internet services, it should be pretty clear to the FCC that they cannot reconcile their interests with those of consumers and innovators. If, on the other hand, access providers are, as they say, concerned only about their ability to invest in their network and manage it responsibly, they will support this application-agnostic regulatory framework.

This is not just a problem for venture capital investors. There is a [great post here](#) that summarizes all of these issues from an entrepreneur's perspective.



We believe it is in everyone's interest to improve the current proposal by:

- defining any application-specific discrimination as unreasonable,
- extending that reasonableness test to include wireless Internet access, and
- making it clear that pay-to-play access fees (whether for access to users or faster access to users) are prohibited.

If you agree, we encourage you to [write to Chairman Genachowski, Commissioner Copps, and, Commissioner Clyburn, Commissioner McDowell, and Commissioner Baker](#) and urge them to work together to make this modest but important change before bringing the rule to a vote later this month.

We also encourage you to exercise your own authority and influence, using the services that you use everyday to let the FCC know you understand the problem and will support their effort to create an application-agnostic regulatory framework:

1. Post your thoughts on your own blog.
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zengzeets 1 hour ago

Never really thought about it like that before, makes sense.

www.internet-privacy.edu.tc



Lee 1 hour ago

Great post Brad

My only comment is the para that reads "If it is not possible to solve all network management problems on older wireless networks in an application-agnostic way, there could be an exception; but the presumption should be that network management would be as application-agnostic as possible."

I think this leaves an enormous potential for abuse. Give a lawyer an inch....

Thassall!



w_jackson 2 hours ago

the question with all of the neutrality talk boils down to leaving the carriers to bear the burden of the traffic, regardless of what it is. This means that they must plan for massive infrastructure, and bear that investment expense only to support someone else's business model of shipping massive amounts of data over their pipes at (essentially) no cost. Not a sustainable model.

In essence, I can see one of two things happening:

- 1: the carriers adopt some kind of pricing that "discriminates" which applications you can use
- 2: the carriers adopt some kind of pricing that "discriminates" over how much bandwidth you can use

Both achieve the same result, which is a robust revenue stream to offset the massive investments in infrastructure to pass the kind of data that we will all require over the internet.

So, which one will you like?



bradburnham ★ 2 hours ago in reply to w_jackson

The point of the post is that we are choosing #2 pricing based on bandwidth rather than pricing based on application. It is that application-agnostic pricing model that separates the the market for Internet services from the market for Internet access, allowing both to develop and innovate independently.

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Matthew A Myers 2 hours ago

Very important issue.

Discrimination is a threat to every web-application, business and consumer.

Big kudos to USV for actively advocating and working on this issue on behalf of everyone. It's actually epic in proportion.

Like Reply



andrewwatson 3 hours ago

Imagine if the phone system had not been opened up and equal access had not been mandated. How many phone companies would there be? Would there be space for telephony startups to be able to get their own DID? Would they get the same level of access to the PSTN?

Not Hardly.

Now apply that to bits instead of waves.

Like Reply



Be Seeing You 13 hours ago

I would suggest that the Internet is far more than just the web. The web is merely one way to use the Internet. I believe that we'll see other methods of using the Internet to access/retrieve/manipulate data that have nothing to do with the web. For example, streaming multimedia, voice over ip, etc. don't require the web to be used. The FCC should really be looking at a much larger picture instead of through the myopic lens of the web.

But your mileage may vary...

Be seeing you...

Like Reply



bradburnham ★ 13 hours ago in reply to Be Seeing You

Of course you are right. The Internet is much more than the web. All more reason to make sure the Internet, all of it, remains open to innovation.

Like Reply



reecepacheco 14 hours ago

Really well done explanation of the issue at hand, Brad.

So important for web startups to understand.

As a web-video startup, we're particularly concerned with the outcome - thanks for fighting on behalf of all innovators everywhere!

Like Reply



bradburnham ★ 14 hours ago

Kid,

We both agree that for the Internet to flourish, it needs to be as free and open as possible. I am arguing that the FCC should step into regulate the natural monopolies that control access to the Internet so that they don't have to regulate the Internet itself. If the access providers are able to offer vertically integrated services in ways that discriminate against web service providers that do not control the broadband pipe to your house, they will quickly crowd out innovative start-ups with the likely result that the FCC will need to become much more involved in the future.

I share your conviction that the government that governs best governs least, but I believe that discrimination by access providers is a much more immediate concern.

(Edited by author 14 hours ago)

1 person liked this. [Like](#) [Reply](#)



kidmercury 4 hours ago in reply to bradburnham

you seem to believe the FCC will not create more problems than it solves; i view the FCC as a captive regulator that is in the pocket of big media. the FCC has sat back idly and perhaps even facilitated the massive media concentration that we currently have. based on this historical track record, i am doubtful of both their ability and their desire to preserve a competitive marketplace in any capacity.

the other issue is that the "NN = freedom" argument is written from the perspective of the application layer. obviously the infrastructure layer disagrees. i would encourage folks to think about what would create the most opportunity from the governance layer, and how far off that is (of course i believe the time is now). in my opinion the largest opportunity the governance layer will bring is in the creation of a federation of tightly integrated networks that agree to certain standards and data portability terms. from this perspective the right to maintain a tightly integrated network is a pre-requisite. anyway, i encourage the few brave souls who dare to dream of the governance layer to think of their ideal policy vision for it.

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gzino 2 hours ago in reply to kidmercury

As Brad says, Internet access/delivery *should be* app agnostic. As Kid implies, FCC regulation and ISP execution can't provide net neutrality, even if they wanted to. And they don't.

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Kevin Morrill 12 hours ago in reply to bradburnham

We should be getting rid of the monopolies (which are not natural at all; they're government created). Getting the government more entrenched will cause all kinds of problems. If you don't think you like Comcast regulating what you get, just wait until it becomes a political football for congress to kick around.

kidmercury liked this [Like](#) [Reply](#)



gzino 2 hours ago in reply to Kevin Morrill

Absolutely. Don't layer on more problems. Address the real one. Directly.
<http://nextblitz.com/blog/net-.../>

[Like](#) [Reply](#)



kidmercury 15 hours ago

just a reminder to all reading this that the FCC's jurisdiction here is highly questionable, and sets the stage for problems down the road. regardless of where one stands regarding net neutrality and what freedoms ISPs should be required to compromise in governing their network, if the authority regulating the web and their rights/responsibilities is not carefully established and monitored, problems will grow. this link elaborates:
<http://www.lewrockwell.com/ori...>

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oburt 5 minutes ago

From **Twitter** via **BackType**

Come on FCC Chairman, two little words: internet access should be "application-agnostic" [@BradUSV](http://t.co/lfQ48Nf/by) #netneutrality

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p_vasconcelos 17 minutes ago

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ONCUZINCIRKIR 22 minutes ago

From **Twitter** via **BackType**

RT [@stevenbjohnson](http://t.co/lfQ48Nf/by): Excellent suggestion by Brad Burnham, tweaking the FCC's proposed open Internet policies: <http://bit.ly/ejOSrh>

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KIRTOK 36 minutes ago

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Care about the future? Take a moment to read [@USV](http://t.co/JrzT5MN)'s msg to [@FCC](http://t.co/JrzT5MN), and pass it on (RT!) <http://t.co/JrzT5MN>

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mindyjiang 51 minutes ago

From **Twitter** via **BackType**

RT [@Katrinskaya](http://t.co/JrzT5MN): Yep. RT [@stevenbjohnson](http://t.co/JrzT5MN): Excellent suggestion by Brad Burnham, tweaking the FCC's proposed open Internet policies: <http://bit.ly/ejOSrh>

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stevelparker 1 hour ago

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In support of Open Internet Access <http://bit.ly/ejm2M4> [@fcc](http://bit.ly/ejm2M4) #netneutrality

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seankz 1 hour ago

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